2002 WATER QUALITY TABLE
Buckman Wellfield

The table below are values for all of the drinking water contaminants that were detected in our drinking water during the calendar year of this report or the most recent test if a sample was not analyzed in 2002. The contaminants detected represent a small fraction of the substances that we test for. For example, we tested for over 50 synthetic organic and volatile organic contaminants, which were not detected. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report or the result of the most recent test. The EPA or the State requires us to monitor for certain contaminants less than once per year because concentrations of these contaminants do not change frequently.

Contaminant (Units)	MCLG	MCL	City Water Levels	Range		Sample Date	Violation	Typical Source
Inorganic Contaminants				Low	High			
Arsenic (ppb)	NA	50	9	3	9	17-Oct-02	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium (ppm)	2	2	0.216	0.033	0.216	26-Feb-01	No	Discharge from drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Cadmium (ppb)	5	5	0.1	ND	0.1	26-Jul-01	No	Corrosion of galvanized pipes; Erosion of natural deposits; Discharge from metal refineries; Runoff from waste batteries and paints.
Chromium [Total] (ppb)	100	100	6	0.7	6	21-Feb-01	No	Discharge from steel and pulp mills; Erosion of natural deposits
Fluoride (ppm)	4	4	0.47	0.28	0.47	20-Mar-02	No	Erosion of natural deposits; Water additive which promotes s trong teeth; Discharge from fertilizer and aluminum factories
Nickel (ppb)	MNR	MNR	0.23	ND	0.23	26-Jul-01	No	Erosion of natural deposits
Nitrate [as N] (ppm)	10	10	0.99	ND	0.99	20-Mar-02	No	Runoff from fertilizer use; Leaching from septic
Selenium (ppb)	50	50	1.8	ND	1.8	26-Jul-01	No	Discharge from petroleum and metal refineries; Erosion of naturaldeposits; Discharge from mines
Radioactive Contaminants								
Alpha Emitters (pCi/l)	0	15	6.28	1	6.28	12-Aug-02	No	Erosion of natural deposits
Beta/Photon Emitters (pCi/l)	NA	NA	18.7	1	18.7	12-Aug-02	No	Decay of natural and man-made deposits. The EPA considers 50 pCil to be the level of concern for beta particles.
Combined Radium 226/228 (pCi/l)	0 5		0.13	ND	0.13	12-Aug-02		Erosion of natural deposits
Radon (pCi/l)	MNR	MNR	486	351	486	25-Jul-00	No	Radon is a naturally-occurring radioactive gas that emits ionizing radiation
Uranium (ug/l)	0	30	54	ND	270	12-Aug-02	No	Erosion of Natural Deposits
Disinfectants & Disinfection By-Products								
Haloacetic Acids (HAA5s) (ppb)	NA	60	1.22	0.8	1.9	31-Dec-02	No	By-product of drinking water chlorination
TTHMs [Total Trihalomethane] (ppb)	NA	80	1.23	ND	3.9	31-Dec-02	No	By-product of drinking water chlorination

Units Description:
NA: Not Applicable; **ND:** Not Detected; **MNR:** Monitoring not required, but recommended; **ppm:** parts per million, or milligrams per liter (mg/l);
ppb: parts per billion, or micrograms per liter (ug/l); **pCi/l:** picocuries per liter (a measure of radioactivity); **ug/l:** Number of micrograms of subtanstance per liter of water;
Range: The range represents the high and low values. In some cases more than one sample is analyzed in a year. Other cases the value provided for range may only be for a single sample.

2002 WATER QUALITY TABLE
City Wellfield

The table below are values for all of the drinking water contaminants that were detected in our drinking water during the calendar year of this report or the most recent test if a sample was not analyzed in 2002. The contaminants detected represent a small fraction of the substances that we test for. For example, we tested for over 50 synthetic organic and volatile organic contaminants, which were not detected. The presence of contaminants in the water does not necessarily indicated that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report or the result of the most recent test. The EPA or the State requires us to monitor for certain contaminants less than once per year because concentrations of these contaminants do not change frequently.

Contaminant (Units)	MCLG	MCL	City Water Level	Range		Sample Date	Violation	Typical Source
Inorganic Contaminants				Low	High			
Arsenic (ppb)	NA	50	5.3	ND	5.3	13-Feb-01	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium (ppm)	2	2	0.752	0.139	0.752	13-Feb-01	No	Discharge from drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Cadmium (ppb)	5	5	ND	ND	1.4	13-Feb-01	No	Corrosion of galvanized pipes; Erosion of natural deposits; Discharge from metal refineries; Runoff from waste batteries and paints.
Chromium [Total] (ppb)	100	100	1.9	ND	1.9	13-Jun-01	No	Discharge from steel and pulp mills; Erosion of natural deposits
Fluoride (ppm)	4	4	0.78	0.13	0.19	13-Jun-01	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nickel (ppb)	MNR	MNR	2.7	ND	2.7	13-Jun-01	No	Erosion of natural deposits
Nitrate [as N] (ppm)	10	10	7.61	2.79	7.61	15-May-02	No	Runoff from fertilizer use; Leaching from septic
Selenium (ppb)	50	50	5	ND	5	13-Jun-01	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines
Thallium (ppb)	0.5	2	0.09	ND	0.09	13-Jun-01	No	Discharge from electronics, glass, and Leaching from ore-processing sites; drug factories
Radioactive Contaminants								
Alpha Emitters (pCi/l)	0	15	2.2	0.8	2.2	12-Aug-02	No	Erosion of natural deposits
Beta/Photon Emitters (pCi/l)	NA	NA	3.6	0.3	3.6	12-Aug-02	No	Decay of natural and man-made deposits. The EPA considers 50 pCi/l to be the level of concern for beta particles.
Radon (pCi/l)	MNR	MNR	402	1	402	17-May-00	No	Radon is a naturally-occurring radioactive gas that emits ionizing radiation
Disinfectants & Disinfection By-Products								
Haloacetic Acids (HAA5s) (ppb)	NA	60	0.83	0.3	1.1	31-Dec-02	No	By-product of drinking water chlorination
TTHMs [Total Trihalomethane] (ppb)	NA	80	1.45	ND	3.9	31-Dec-02	No	By-product of drinking water chlorination

Units Description:
NA: Not Applicable; **ND:** Not Detected; **MNR:** Monitoring not required, but recommended; **ppm:** parts per million, or milligrams per liter (mg/l);
ppb: parts per billion, or micrograms per liter (ug/l); **pCi/l:** picocuries per liter (a measure of radioactivity); **ug/l:** Number of micrograms of subtanstance per liter of water;
Range: The range represents the high and low values. In some cases more than one sample is analyzed in a year. Other cases the value provided for range may only be for a single sample.

2002 WATER QUALITY REPORT

City of Santa Fe Water Division
P.O. Box 909, Santa Fe, NM 87504

Customer Service (505) 955-4333
Administration (505) 955-4202

INTRODUCTION

This is an annual report on the quality of drinking water delivered by the City of Santa Fe's Sangre De Cristo Water Division (SDCW) to its customers. SDCW is subject to the federal Safe Drinking Water Act and is required to test and meet United States Environmental Protection Agency (EPA) and State of New Mexico Drinking Water Standards. This report contains information on calendar year 2002 water quality tests. Additional details about where your water comes from, what it contains, and how it compares to standards set by federal and state regulatory agencies are also included. A safe and dependable water supply is vital to our community and is the primary mission of SDCW.

SOURCES OF SUPPLY

The SDCW is served by three separate sources of water supply. These are the Buckman well field, the City well field and surface runoff generated by the Santa Fe Watershed. The Buckman well field consists of 9 active wells located near the Rio Grande approximately 15 miles northwest of Santa Fe. The City well field is mostly located in close proximity to the Santa Fe River and consists of 8 active wells located within the City of Santa Fe limits. The City's surface water supply is generated by runoff from the 17,000 acre Santa Fe watershed. The runoff drains into the Santa Fe River where it is stored at the McClure and Nichols Reservoirs.

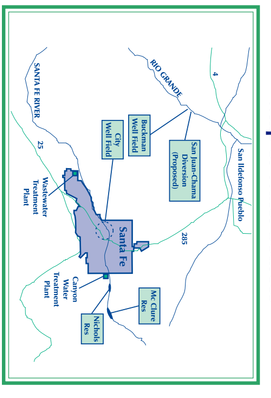
Do I need to take special precautions?

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy; persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Water Drinking Hotline (800-426-4791).

EN ESPAÑOL

Este reporte contiene informacion importante sobre la calidad delagua en Santa Fe. Si tiene alguna pregunta o duda sobre este reporte puede hablarle a Gary Martinez al telephono 505.955.4370.

Map of Water Sources



Source water assessment and its availability

In calendar year 2002 the New Mexico Environment Department conducted and completed the Source Water Assessment for the City of Santa Fe. This assessment includes a determination of source water protection areas and an inventory of pollution sources within the areas of concern. A copy of this report is available for review.

Terms and Abbreviations

Maximum contaminant level goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
Maximum contaminant level (MCL): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
Treatment technique(TT): A required process intended to reduce the level of a contaminant in drinking water.
Action level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

2002 WATER QUALITY REPORT

Why are there contaminants in my drinking water?

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk.

More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's (EPA) Safe Drinking Water Hotline 800-426-4791, or visiting www.epa.gov/safewater. The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. This can include microbial contaminants, such as viruses and bacteria that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife. Inorganic contaminants, such as salts and metals, can be naturally-occurring or result from urban storm-water runoff, industrial, or domestic wastewater discharges, oil and gas production, mining or farming.

Pesticides and herbicides may come from a variety of sources, such as agriculture, urban storm-water runoff, and residential uses. Organic Chemical Contaminants, including synthetic and volatile organic chemicals are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff and septic systems.

Radioactive contaminants are naturally occurring, or are the result of oil and gas production and mining activities. In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

Violation of Surface Water Treatment Rule Filtration Violation

In February of 2002 the SDCW finished water turbidity exceeded the monthly turbidity standard of 0.3 NTU. Plant operations staff determined this exceedance was the result of plant start-up problems and not inadequate filtration. At that time plant operations staff maintained the appropriate disinfectant residuals. The City utilizes a multi-barrier approach to protect citizens from water borne pathogens. City residents were notified of the problem and the actions officials took to correct the situation. Inadequately treated water may contain disease-causing organisms.

These organisms include bacteria, viruses, and parasites, which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

Unregulated Contaminant Monitoring (UCMR)

In calendar year 2002 the City of Santa Fe was sampled for 11 "unregulated" contaminants (UCMR). This sampling is part of a national effort to determine occurrence of contaminants in the nation's drinking water supplies and use this information to set future national drinking water standards. The following parameters comprise the UCMR list. The UCMR contaminants were not detected in the water supply. The sampling events took place on May 24, 2002 and November 22, 2002.

Parameter	Results (ug/l)
Acetochlor	not detected
2, 4 – Dinitrotoluene	not detected
2, 6 – Dinitrotoluene	not detected
DCPA acid metabolites	not detected
4-, 4 – DDE	not detected
(4, 4 – DDE 4,4 – dichloro dichlorophenyl ethylene)	
EPTC	not detected
(s-ethyl dipropyl thiocarbamate)	
Molinate	not detected
MTBE	not detected
(methyl tertiary-butyl ether)	
Nitrobenzene	not detected
Terbacil	not detected
Perchlorate	not detected

Results of Radon Monitoring

The City of Santa Fe water system has been sampled for radon gas in drinking water. This is not a required test since the EPA has not finalized the regulation.

However, in an effort to be proactive these tests have been conducted over the past several years. The results indicated radon gas at levels in water of 300 to 400 picocuries per liter of water (pCi/l). EPA has proposed that the standard for drinking water be set at 4000 pCi/l. As proposed SDCW will be subject to this standard provided a program is in place to mitigate the radon present in in-door air. Radon is a radioactive gas that can't be seen, tasted, or smelled. It is found throughout the U.S. Radon can move up through the ground and into a home through cracks and holes in the foundation. Radon can build up to high levels in all types of homes. Radon can also get into indoor air when released from tap water from showering, washing dishes and other household activities.

Compared to radon entering the home through soil, radon entering the home through tap water will in most cases be a small source of radon in indoor air.

Radon is a known human carcinogen. Breathing air-containing radon can lead to lung cancer. Drinking water containing radon may also cause increased risk of stomach cancer. If you are concerned about radon in your home, test the air in your home. Testing is inexpensive and easy. Fix your home if the level of radon in your air is 4 picocuries per liter of air (pCi/L) or higher. There are simple ways to fix a radon problem that aren't too costly. For additional information, call your state radon program or call EPA's Radon Hotline (800-SOS-RADON).

Results of Voluntary Monitoring

Los Alamos National Laboratory in cooperation with the City of Santa Fe has conducted tests to determine if perchlorate is present in the Buckman Wells. No perchlorate was detected in any of the samples collected from the Buckman Wells Nos. 1, 2, and 8 at concentrations greater than the laboratory detection limit of 1.45 parts per billion.

Educational Statement for Arsenic

The City of Santa Fe's Drinking water meets the current drinking water standard for arsenic of 50 μg/l. A new standard for arsenic in drinking water of 10 μg/l will go into effect in 2006. Sampling conducted in 2002 indicated arsenic levels in City of Santa Fe drinking water below the new standard of 10 μg/l.

EPA's new standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water.

EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

Uranium

In 2002 the City detected uranium above the new drinking water standard of 30 μg/l at one of its sampling points. The new standard goes into effect on December 8, 2003. A source in the Buckman wellfield contains elevated levels of uranium in sufficient amounts to have caused this level. Proper management and/or treatment of the well will result in compliance by the effective date of the rule. Some people who drink water containing uranium in excess of the MCL (30 ug/L) over many years may have increased risk of getting cancer and kidney toxicity.

Nitrates

City of Santa Fe drinking water meets the federal drinking water standard of 10 ppm for nitrates. Nitrates have been detected in some of the City Wells above 5 ppm. This value, which is ½ the standard, triggers an increase in sampling from once per year to 4 times per year.

Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant you should ask advice from your health care provider.

Total Trihalomethanes (TTHMs)

Although the maximum contaminant level was not exceeded in 2002, the City of Santa Fe detected TTHMs in two samples above 80 μg/l. To ensure that the city continues to meet this standard, treatment plant officials have implemented changes in operations that have resulted in lower overall TTHM levels. Some people who drink water-containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

Lead and Copper Sampling

Tests for lead and copper are taken from customer taps located throughout the City. Lead and copper are present in home plumbing fixtures and pipes. If you are concerned about elevated lead levels in your home's water you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water.

Inorganic Contaminants	Copper (ppm)	Lead (ppb)
MCLG	1.3	0
AL	1.3	15
City Water Levels*	1.1	9
Number of Samples <AL	31	31
Sample Date	26-Sep-02	26-Sep-02
Exceeds AL	No	No
Typical Source	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems	Corrosion of household plumbing systems; Erosion of natural deposits

*The City lead and copper levels reported are values for the 90th percentile which in this case is the 28th sample.

Contacts for Additional Information

If you have any questions, comments, or suggestions regarding this report, please contact Gary Martinez at 955-4370 or write to the above address. Feel free to call SDCW for information about the next opportunity for public participation in decision about our drinking water. For further information, consult the City of Santa Fe's Website at www.ci.santa-fe.nm.us or EPA at www.epa.gov/safewater or the Safe Drinking Water Hotline 800.426.4791.

2002 WATER QUALITY TABLE
Surface Water Treatment Plant

The table below are values for all of the drinking water contaminants that were detected in our drinking water during the calendar year of this report or the most recent test if a sample was not analyzed in 2002. The contaminants detected represent a small fraction of the substances that we test for. For example, we tested for over 50 synthetic organic and volatile organic contaminants, which were not detected. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report or the result of the most recent test. The EPA or the State requires us to monitor for certain contaminants less than once per year because concentrations of these contaminants do not change frequently.

Contaminant (Units)	MCLG	MCL	City Water Levels	Range		Sample Date	Violation	Typical Source
				Low	High			
Inorganic Contaminants								
Barium (ppb)	2	2	0.006	0.006	0.006	20-Mar-02	No	Discharge from drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chromium [Total] (ppb)	100	100	0.1	0.1	0.1	20-Mar-02	No	Discharge from steel and pulp mills; Erosion of natural deposits
Fluoride (ppm)	4	4	0.78	0.14	0.78	20-Mar-02	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Selenium (ppb)	50	50	0.34	0.34	0.34	20-Mar-02	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines
Radioactive Contaminants								
Alpha Emitters (pCi/l)	0	15	0.3	0.3	0.3	5-Oct-99	No	Erosion of natural deposits
Beta/Photon Emitters (pCi/l	NA (pCi/l	NA	0.3	0.3	0.3	5-Oct-99	No	Decay of natural and man-made deposits. The EPA considers 50 to be the level of concern for beta particles.
Disinfectants & Disinfection By-Products								
Haloacetic Acids (HAA5s) (ppb)	NA	60	35.43	1.73	97.2	31-Dec-02	No	By-product of drinking water chlorination
TTHMs [Total Trihalomethane] (ppb)	NA	80	60	ND	111	31-Dec-02	No	By-product of drinking water chlorination
Total Organic Carbon (TOC)	NA	TT	2.4 to 4.6	2.4	4.6	31-Dec-02	No	Naturally present in the environment. TOC has no health effects. However, TOC provides a medium for the formation of disinfection by products. These by products include trihalomethanes (THM) and haloacetic acids (HAAs). Drinking water containing these by products in excess of the MCL may lead to adverse health affects, liver or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer.

Units Description:
NA: Not Applicable; **ND:** Not Detected; **MNR:** Monitoring not required, but recommended; **ppm:** parts per million, or milligrams per liter (mg/l);
ppb: parts per billion, or micrograms per liter (ug/l); **pCi/l:** picocuries per liter (a measure of radioactivity); **ug/l:** Number of micrograms of substantance per liter of water;
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